Georgia Institute of Technology

The Leadership Challenge: Strategies to Seize Our Opportunities

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Administrative Retreat

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Megatrends in a New Millennium

- Talent is dominant
- Population continues to diversify
- Technology is ever more pervasive
- Interdisciplinary is in; biotechnology, nanotechnology, IT expand their impact
- Shelf-life of knowledge shortens

Megatrends (continued)

- Computing and communications grow exponentially; infinite information access
- Major industries converge and globalize
- Entrepreneurism, start-ups change economy
- Federal support for research lessens; industry looks to universities for long-term research

Leveraging the megatrends...

to seize our opportunities.

Implications for Georgia Tech

- Industry follows talent to our campus
- Importance of diversity grows
- All industry is now high-tech; our role grows
- Influence of traditional disciplines declines; importance of biotechnology, nanotechnology, information technology grows
- Lifelong learning concept becomes reality
- Research environment grows more complex

Implications for Tech (Continued)

- Technology changes learning environment
- Educate leaders, not technicians
- Inculcate understanding of new economy: speed, agility, adaptability, decision making
- Establish links to entrepreneurial companies
- Institutional agility is critical (complacency is death; complexity is slow death)

Georgia Tech in the New Millennium

- A world-class university
- A catalyst for economic development in Georgia
- Stimulus for an economic and cultural renaissance in Midtown
- A campus environment that supports institutional aspirations

Building a National/International Profile

- Sharpen strategic plan
- Become a player in setting policy at state, national, and international levels
- Increase profile in blue chip organizations in higher education
- Build breadth in national rankings
- Establish east/west international beachheads
- Strengthen focus on learning and students (compassionate academia)

Strategic Positioning

- Revise the GT Strategic Plan
- Carefully choose targets of opportunity
- Develop communications strategy
- Build and reinforce strategic partnerships

"We're surrounded by insurmountable opportunities."

- Pogo

"The essence of strategy is choosing what not to do."

- Michael Porter

Influencing Technology Policy

- Organizations - NAE, NAS, IOM, Council on Competitiveness, Science Coalition
- Build relationships - e.g., Center for Science, Policy, and Outcomes with Columbia University
- Capitalize on European Union Center
- Develop centers with national policy impact - e.g., Information Security Center

Influencing State Policy

- State Data Center
- Center for Geographic Information Systems
- Center for Transportation Research
- GT Regional Engineering Program
- ATDC, Yamacraw, GCATT
- Traditional Industries Program
- Skidaway Institute of Oceanography

Influencing Local Policy

- John Williams Center for Quality Growth and Regional Development: West Chair
- Electronic Modeling of Large Urban Areas
- SMARTRAQ
- Support and shape Metro Atlanta Chamber of Commerce initiatives

Blue Chip Memberships

- National Academy of Engineering - 16 members
- National Academy of Sciences - 2 members
- Institute of Medicine - 1 member
- American Association of Universities - aspiring member

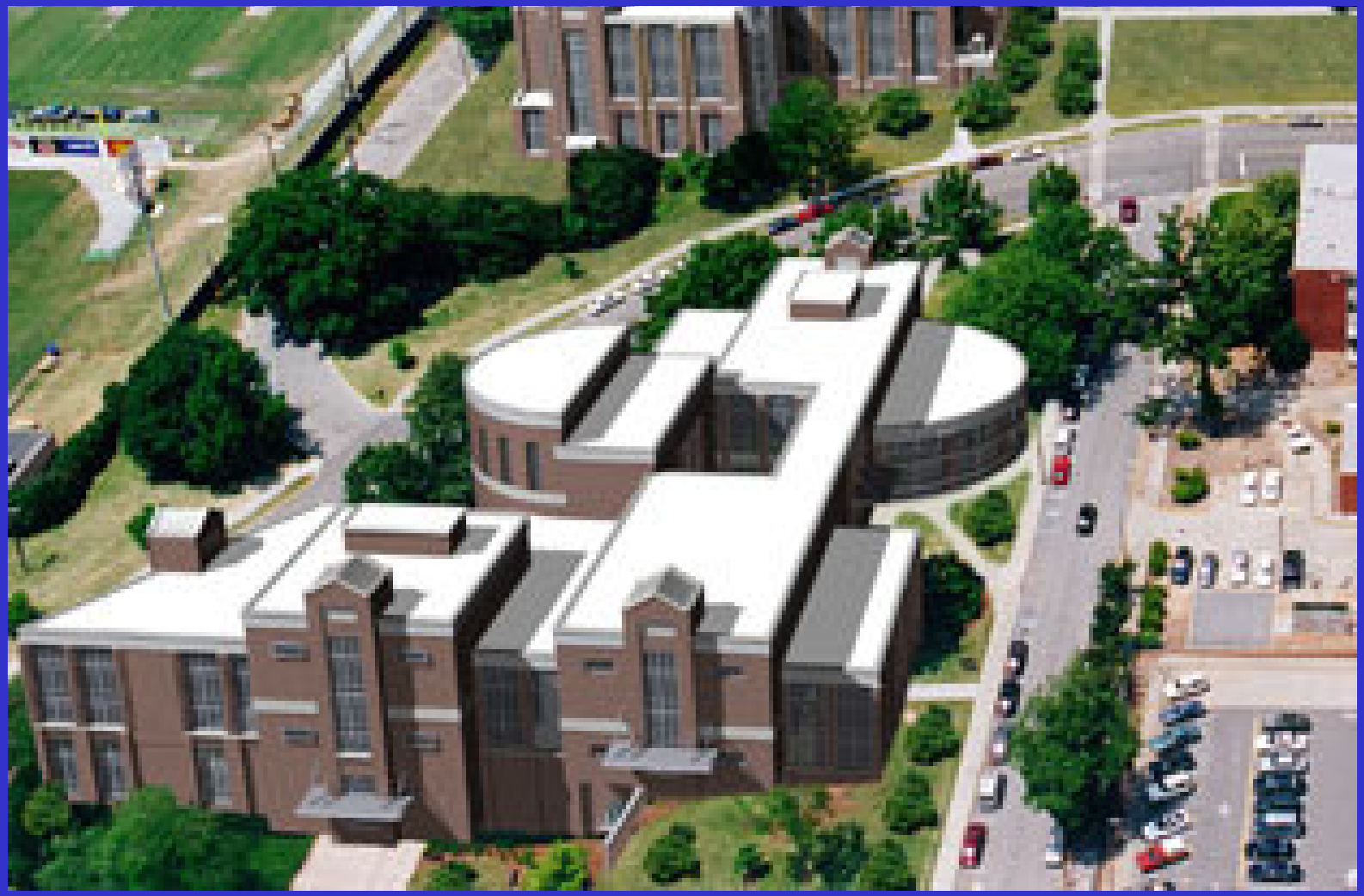
Opportunities...

to raise our profile and make our mark.

Computing and Advanced Communications Technology

- Rapid growth in student interest
- Strong support by industry and state
- Advanced Computing Technology Building
- Yamacraw Program and Design Center
- GCATT

Advanced Computing Technology Building



Biotechnology and Sustainable Technology

- Biotechnology partnership with Emory
  - Joint department, joint degrees
  - Joint biotechnology research park
- Sustainable technology
  - Center for Sustainable Technology
  - Skidaway Institute of Oceanography
- BEM Complex

BEM Complex

Entrepreneurism and Electronic Commerce

- DuPree Center for Entrepreneurism: Munchak and Huang Chairs
- iXL Center for Electronic Commerce
- MS in Management of Technology
- Proposed Executive Education Center
- ATDC franchises
- Atlanta

International Initiatives

- Metz Campus
- Logistics Institute-Asia: joint program with National University of Singapore
- CIBER
- Sam Nunn School of International Affairs
- Study abroad programs

Interdisciplinary Research Thrusts

- Engineering of living tissues
- Next generation of semiconductors
- Center for New Media Education and Research
- Nanostructures and miniaturization
- Severe weather forecasting

Educational Technology

- Wired (and wireless) campus; student computers required
- Technology-based classroom
- Web-enhanced curriculum
- Internet course delivery
- GTREP

Student Life and Campus Environment

- Enclose Aquatic Center and renovate SACI
- Build Undergraduate Learning Center
- Implement Master Plan
- Expand and build new athletic fields
- Create a learning community

Stimulating a Midtown renaissance...

through high-tech development.

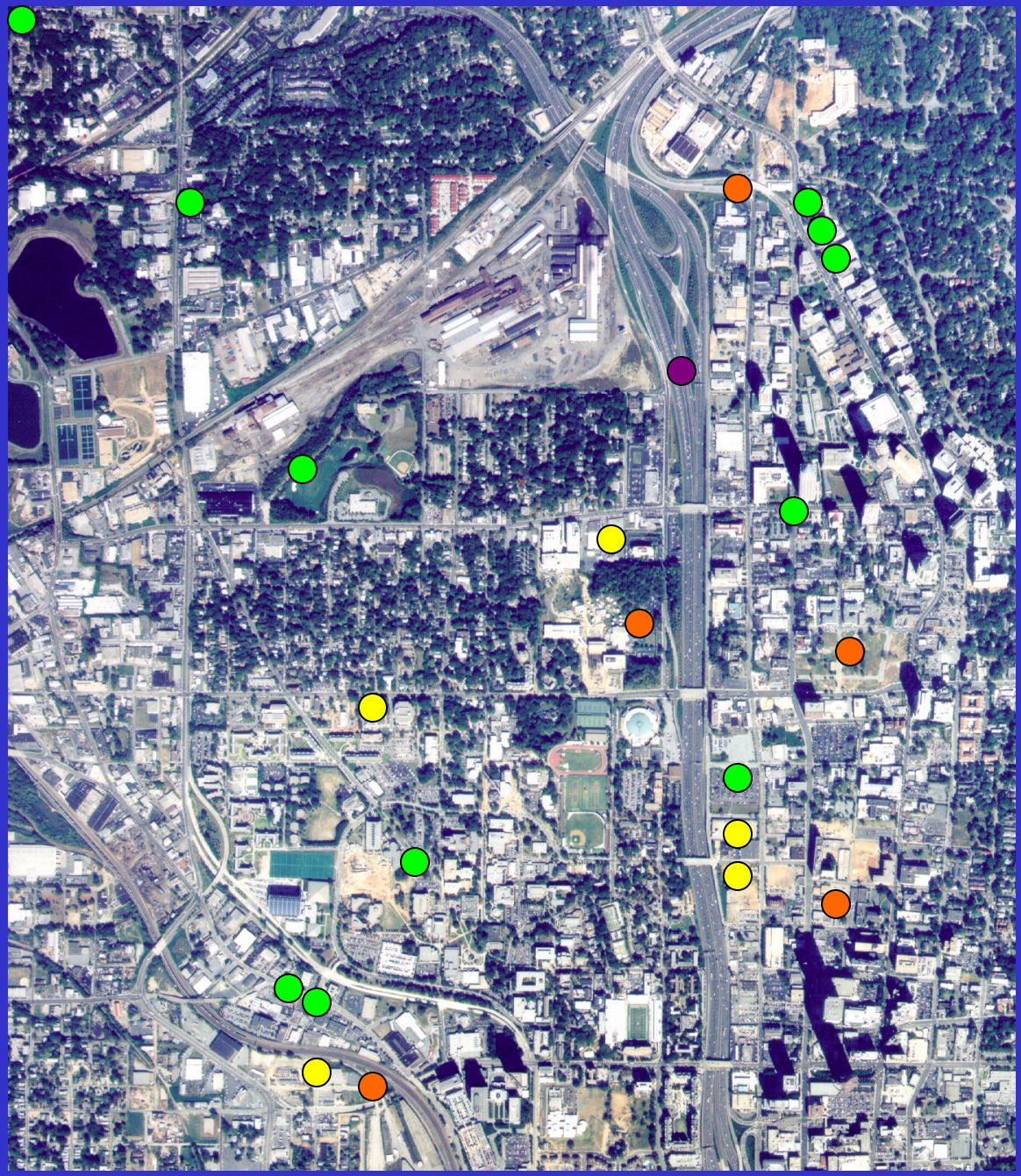
Industries of the Mind

- Fastest growth of high-tech jobs in nation
- Atlanta Chamber of Commerce: identified 517 companies to recruit to Atlanta
- Developing strategy to grow and recruit talent
- Marketing Midtown as a high-tech hot spot - Governor Barnes/Mayor Campbell

Midtown's Synergy

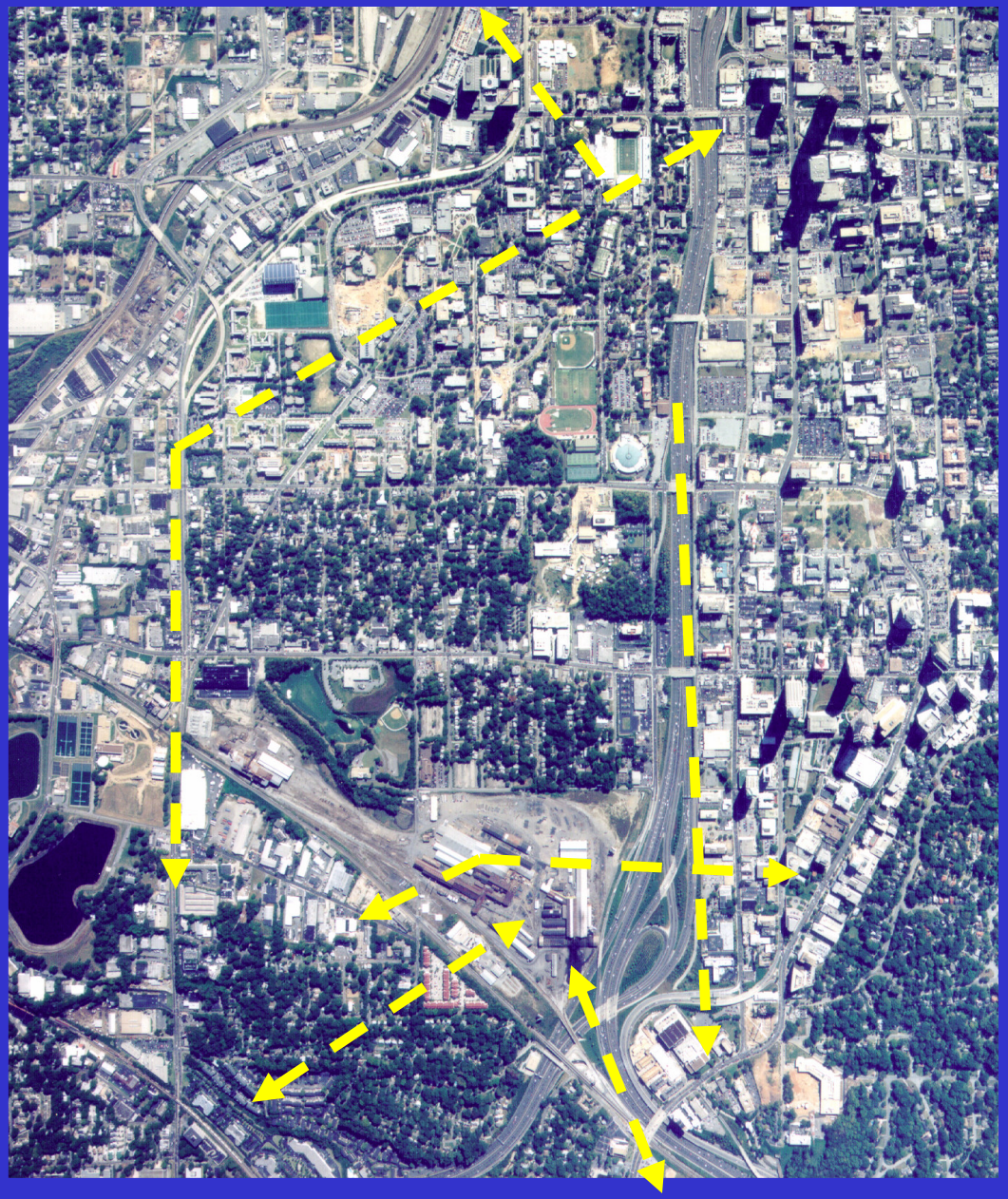
- GT Facilities
- Start-ups
- Expanding giants

Numerous loft/ condo/apartment projects



Linkages

- High-tech corridor
- 5th Street spine
- North Avenue Research Area
- Downtown
- Light rail



Building the future...

means overcoming its challenges.

Challenges of the Future

- Uncertainties in state funds
- Uncertainties in research funds
- Achieving diversity
- Enhancing faculty/student interaction
- Campus visits: Faculty concerns
- Reducing potential for internal conflict

Uncertainties in State Funds

- 11.6% EFT enrollment decline systemwide, fall of 1997 to fall of 1998
- $100 million decrease projected in formula funding for FY 2001, perhaps more
- K-12 and technical institute systems also examining their funding mechanisms
- Shifting political power balance

Uncertainties in Research Funds

- Projected decline in federal research funds, FY 1999 - FY 2004:
  - 14.3% decrease in defense R&D
  - 14% decrease in NSF funding
  - 6.3% decrease in NIH funding
  - 13.5% decrease in Dept of Energy funding

Adjusted for inflation
Source: AAAS

Achieving Diversity

- InGEAR study
- EMERGE
- $2.5 m NSF grant with Morehouse and Spelman Colleges to double African American PhD's in science and engineering
- Women's Resource Center/Office of Diversity programs
- Heightened commitment

Enhancing Faculty-Student Interaction

- 15% of freshmen drop out, not because of academic failure, but because they have not connected personally with campus life.
- Connecting students, faculty, staff:
  - In study groups and across the curriculum
  - In the residence halls
  - Through extra-curricular activities

Campus Visits: Faculty Concerns

- Morale is generally strong, some exceptions
- Concern in some units about perception of role
- Real and perceived barriers to doing industry research and spinning off businesses
- Condition of classrooms
- Desire to live near campus

Reducing Internal Conflict

- Ombuds program
- Alternative dispute resolution procedure
- Uphold a consistent level of ethics
- Better management/training

The rubber hits the road...

in the Strategic Plan.

Revisiting the Original Agenda

- Enrich educational opportunities
- Improve student life
- Maintain and enhance research
- Take full advantage of technology
- Improve the infrastructure
- Identify optimum size and composition
- Expand collaboration, linkages, economic development efforts